

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-13 (Cancelled)

14. (New) A fuel supply assembly for a liquid fueled engine including a combustion chamber for combusting fuel, and an exhaust for the combusted fuel, which assembly comprises:

a vaporizing tank, a quantity of a liquid fuel contained in the tank, a heating source for heating the liquid fuel, and a temperature control for controlling the temperature of the liquid fuel as contained in the tank;

said temperature control maintaining the temperature of the liquid fuel at a determined temperature to vaporize the liquid fuel, a conduit arrangement conveying the vaporized fuel from the tank, a primary source of ambient air mixed with the vaporized fuel, said conduit arrangement conveying the intermixed ambient air and vaporized fuel to the engine for combustion; and

an automatic control substantially continuously monitoring the engine exhaust during operation of the engine and controlling the intermixing of the ambient air and vaporized fuel to maintain a desired hydrocarbon level in the exhaust throughout changing environmental and load demand conditions.

15. (New) A fuel supply assembly as defined in Claim 14 wherein a secondary source of the ambient air is directed into and through the tank for collecting and conveying an enriched vaporized fuel and air mixture into the conduit to be thereafter combined with the primary source of ambient air.

16. (New) A fuel supply assembly as defined in Claim 15 wherein a valve is provided for one or both of the primary source of ambient air and enriched vaporized fuel and air mixture, said one or both valves controlling the intermixing of said primary ambient air and vaporized fuel and air mixture.

17. (New) A fuel supply assembly as defined in Claim 16 wherein said control comprises a sensor sensing combustion exhaust of said engine for determining the presence of hydrocarbons in said exhaust, said valve responsive to said sensor for modifying said intermixing and to thereby maintain a desired content of hydrocarbons in said exhaust.

18. (New) A fuel supply assembly as defined in Claim 17 wherein said sensor senses O² emissions and said control determines the hydrocarbons based on the O² emissions.

19. (New) A fuel supply assembly as defined in Claim 15 wherein a baffle arrangement in the tank directs air from said secondary source over the surface of the liquid fuel for stabilizing the temperature of said air as the air collects and conveys the vaporized fuel.

20. (New) A fuel supply assembly as defined in Claim 14 wherein said fuel source assembly is provided as an alternate fuel source to said engine.

21. (New) A fuel supply assembly as defined in Claim 20 wherein the fuel as vaporized produces a residual fuel portion and a control for selectively providing vaporized fuel and/or a liquid fuel to the combustion chamber, said residual fuel conveyed to said combustion chamber as liquid fuel.

22. (New) A fuel supply assembly for an internal combustion engine comprising:
a vaporizing tank containing a quantity of liquid fuel and a fuel supply supplying said liquid fuel to the vaporizing tank;
said liquid fuel having a composition wherein vaporization thereof readily occurs in a first portion and not in a residual portion;
a vaporizing mechanism for vaporizing the first portion liquid fuel supplied to the vaporizing tank;

a first conduit arrangement conveying vaporized fuel from the tank to the engine; and

a purging conduit arrangement for periodic purging of the residual portion.

23. (New) A fuel supply assembly as defined in Claim 22 wherein an alternate fuel source provides fuel to the engine during the purging process.

24. (New) A fuel supply assembly as defined in Claim 22 wherein the engine is adapted to alternatively receive vaporized fuel and liquid fuel, said purging conduit arrangement providing said residual portion to said engine as the alternate fuel source.

25. (New) A fuel supply assembly as defined in Claim 22, including a storage tank, said purging conduit conveying said residual portion to said storage tank for alternate use.

26. (New) A fuel supply assembly as defined in Claim 24, including a recycle control for a) vaporizing a portion of the liquid fuel supplied to the vaporizing tank that will readily vaporize while running the engine on vaporized fuel; and b) switching engine operation to liquid fuel operation for purging the tank.